

Prior to turning to the Office Action, Applicants' attorney and Applicants' representative, Mr. Noriyoshi Aoki, wish to thank Examiners Kishore and Berman for the opportunity to conduct a personal interview with the Examiners. It is believed that the discussions at the personal interview advanced the prosecution of this case.

I. Claim Objections

Claim 45 was objected to because the word "in" was left out of the phrase "described claim 41" in line 1.

Applicants have included the word "in" in claim 45 to correct the typographical error.

This objection would appear to be met.

II. Rejection under 35 U.S.C. § 112

The Examiner rejected claim 19 under 35 U.S.C. § 112, second paragraph and recites the limitation "the water-soluble and gel-forming base" in line 12 as insufficient, and assumed that Applicants were referring to "a water-absorbing and gel-forming base" in line 4.

Applicants have changed the phrase "the water-soluble and gel-forming base material" to "the water-absorbing and gel-forming base material" in claim 19. Moreover the water absorbing and gel-forming base is now more specifically directed. It is believed that antecedent basis now should be considered to exist.

The Examiner is unclear as to the term "on/in" and renders the claims indefinite.

Applicants state that the term "on/in" means "on or in" and Applicants have amended all of Applicants' claims for clarification.

With the above, it is believed that this rejection is met.

III. Rejection Under 35 U.S.C. § 102

The Examiner rejected claims 19-26, 28-32, 34 and 36-45 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Suzuki et al. (US 4,613,500).

The Examiner refers to the reasons of record set forth in the previous Office Action as a basis for continuing this rejection.

Applicants submit that Applicants' invention is not anticipated by the disclosure of Suzuki et al. and requests reconsideration in view of the following.

Suzuki et al disclose as to the composition set forth that the composition includes (1) a peptide drug, (2) a water-absorbing and water-insoluble base material (hereinafter "CC"),^{1/} and (3) a water-absorbing and water-soluble base material (hereinafter HPC").^{2/}

The weight ratio of HPC to CC HPC/CC is 0.1 to 60%. The weight ratio of HPC to HPC plus CC.

In terms of compositional characteristics, Applicants summarize the Suzuki disclosure on compositional aspects in Table A below.

^{1/} The abbreviation CC is being used for simplicity to describe the water-absorbing and water-insoluble base material since crystalline cellulose is an example of such.

^{2/} The abbreviation HPC is being used for simplicity to describe the water-absorbing and water-soluble base material since hydroxypropyl cellulose is an example of such.

Table A

	State of the Composition	Reference to
a1	CC and drug form independent particles	lines 54-56, column 5
a2	CC, HPC and drug form independent particles	lines 54-56, column 5 and lines 10-12, column 6
b1	drug particles are adhered to the surface of CC	lines 57-59, column 5
b2	drug particles are adhered to the surface of CC and HPC	lines 57-59, column 5 and lines 10-12, column 6
c1	drug particles are dispersed in CC both forming separate phases of their own	lines 59-62, column 5
c2	Drug particles are dispersed in CC and HPC, both forming separate phases of their own	lines 59-62, column 5 and lines 10-12, column 6
d1	drug particles are closely dispersed in CC thus forming a uniform dispersion	lines 62-62, column 5
d2	drug particles are closely dispersed in CC and HPC, thus forming a uniform dispersion	lines 62-62, column 5 and lines 10-12, column 6

Thus, it can be seen that as to the composition of Suzuki et al, (1) independent particles of drug exhibit and CC, (2) independent particles of drug, CC and HPC exist, (3) drug particles adhere to the surface of CC or to the surface of both CC and HPC, (4) drug particles are dispersed in CC or in CC and HPC, with both forming separate phases of their own or (5) drug particles are closely dispersed uniformly in CC or in CC and HPC.

None of the compositional situations as to Suzuki et al noted above would teach or suggest Applicants' invention involving an uneven dispersion.

Considering now the disclosure in Suzuki et al as to how the composition of Suzuki et al is made, Applicants wish to advise the Examiner of the following information as to Suzuki et al. as set forth in Table B below.

Table B

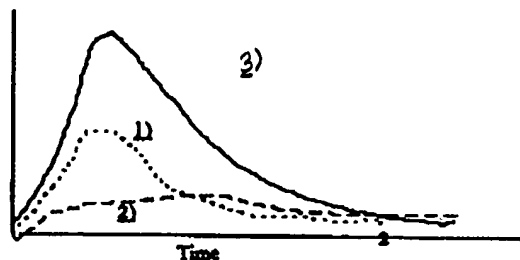
Comp.	Type	Method	Reference to
a1,b1	dry	CC and drug → mixing by mechanical process → filtering	lines 3-9, column 6
a2,b2	dry	CC, HPC and drug → mixing by mechanical process (simultaneously) → filtering	lines 10-14, column 6
c1,d1	dry	CC and drug → mixing by mechanical process → compacting under pressure → pulverizing → filtering	lines 24-31, column 6
c1,d1	wet	CC and drug → thoroughly mixing in water to make a thin smooth pasty mixture → (dry) → pulverizing → filtering	lines 31-37, column 6
c2,d2	dry	HPC is admixed with drug and CC → mixing by mechanical process → compacting under pressure → pulverizing → filtering	lines 38-43, column 6
c2,d2	FD/dry	HPC and drug, mixing in water → freeze-dried → added CC and mixing → compacting under pressure → pulverizing → filtering	lines 38-43 and 47-52, column 6
c2,d2	wet	CC, HPC and drug → thoroughly mixing in water to make a then smooth pasty mixture → (dry) → pulverizing → filtering	lines 43-46, column 6
c2,d2	FD/wet	HPC and drug, mixing in water → freeze-dried → added CC, thoroughly mixing in water to make a thin smooth pasty mixture → (dry) → pulverizing → filtering	lines 43-46 and 47-52, column 6

Turning now to Applicants' claimed invention, Applicants wish to emphasize that Applicants' invention as claimed is:

(A) a powdery composition which contains (i) a drug, (ii) a water-absorbing and gel-forming base material, and (iii) a water absorbing and water-insoluble material

(B) the drug is unevenly dispersed more on or in the water absorbing and water insoluble base material than on or in the water-absorbing and gel forming base material.

The importance of this composition was discussed at the interview with the following diagram showing prior art performance, Suzuki et al performance and present invention performance demonstrates the uniqueness of Applicants invention.



In the above^{3/} the curves represent performance in terms of blood level (ordinate) vs. time (abscissa), with 1) being the conventional method, 2) the Suzuki's method and 3) the present invention using "unevenly" dispersion. It can be clearly seen from the above graphic that unexpected results are shown.

The meaning technically of "unevenly dispersed" in the present invention is set forth on pages 8-9 of the specification of the above-named application.

^{3/} The above graphic is slightly different from that shown to the Examiners during the interview in that a mistake in labeling the curves was made in the figure shown to the Examiners at the interview. The curves designated 10, 20 and 30 are correctly shown in this graphic.

The state, in which the drug is unevenly dispersed more on/in the water-absorbing and water-insoluble base material than on/in the water-absorbing and gel-forming base material, includes a state in which the drug is adhered to base materials according to the compounding ratio of the base materials. A state, in which 70 wt % or more based on the drug is adhered to both the base materials according to the compounding ratio of the base materials, is preferable. A state, in which 80 wt % or more based on the drug is adhered to both the base materials according to the compounding ratio of the base materials, is especially preferable. For instance, in a state in which 70 wt % or more based on the drug is adhered to both the base materials according to their compounding ratio, when the amount of the water-absorbing and gel-forming base material is 40 wt % based on the total of both the bas. materials, 42 wt % based on the drug adheres to the water-absorbing and water-insoluble base material, 28 wt % adheres to the water-absorbing and gal-forming base material, and the remaining 30 wt % is homogeneously dispersed in the composition.

Furthermore, the state, in which the drug is unevenly dispersed more on/in the water-absorbing and water-insoluble base material than on/in the water-absorbing and gel-forming base material, also includes a state in which the drug is adhered to the water-absorbing and water-insoluble base material in a larger amount than in a state in which the drug is adhered to both the base materials according to their compounding ratio. A state, in which 60 wt% or more based on the drug is adhered to the water-absorbing and water-

insoluble base material, is preferable. A state, in which 70 wt% or more, especially 80 wt % or more, based on the drug is adhered to the water-absorbing and water-insoluble base material, is especially preferable. In these states, the remaining less than 30 wt % or less than 20 wt % based on the drug is homogeneously dispersed in the composition freely and/or adhered to the water-absorbing and gel-forming base material.

Applicants submit that their invention is not obvious in view of the Suzuki et al disclosure.

Specifically, there is no suggestion in Suzuki et al that it is unexpectedly advantageous to disperse the drug unevenly on or in the water absorbing and water insoluble material and not on or in the water absorbing and gel forming base material.

At the interview, the Examiner appeared to the undersigned to be impressed with the graphical presentation as set forth above, and felt it would be quite probative if presented in the form of a Declaration under 37 C.F.R. § 1.132. Such a declaration is submitted herewith.

During the interview, the Examiners appeared to interpret Suzuki et al and applicants' invention to be different because Suzuki et al was a dry process whereas Applicants technology was a wet process. Applicants wish to clarify that both Suzuki et al and Applicants' invention produce compositions using a dry process and a wet process. However, importantly, the Suzuki et al does not teach producing a composition having characteristics (1) and (2) above using either a dry or a wet process.

In view of the above, Applicants submit that Applicants' claimed invention is not obvious and requests reconsideration of this rejection under 35 U.S.C. § 102.

IV. Rejection Under 35 U.S.C. § 103

The Examiner has also rejected claims 19-32, 34, 34 and 36-45 under 35 U.S.C. § 103 as being unpatentable over Suzuki et al. as applied to claim 19 above in further view of Makino et al. (US 5,262,871).

Applicants submit that Makino et al does not supply the deficiencies as noted in detail above.

Thus, for the reasons set forth above as to the rejection over Suzuki et al, Applicants' invention is not obvious over the combination with Makino et al.

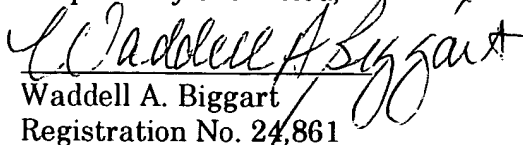
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Again, Applicants' attorney wishes to thank the Examiners for their courtesy during the personal interview.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

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